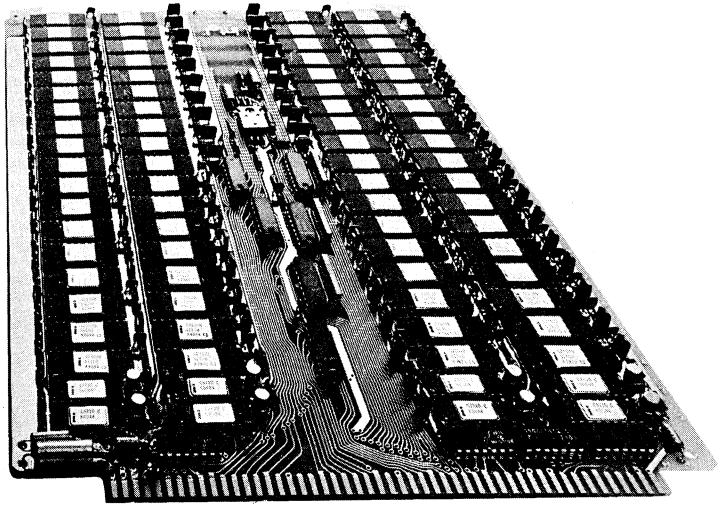
in-40

RANDOM ACCESS MEMORY SYSTEM

The in-40 is one of the highest density memory systems now available. The system uses high performance Intel 2107B, a 4K RAM Memory component. Fast cycle and access times are provided along with this high density. The interchangeable memory unit (MU) allows expansion in increments of 16K x 18 or 32K x 9 with no adjustments. A single control unit (CU) handles up to 128K x 18 or 256K x 9 making this our lowest cost-per-bit storage available.



in-40 FEATURES:

- Low Cost Memory
- High Reliability
- High Density
- Modular Expandability
- Module Interchangeability
- Automatic Refresh
- Fast Cycle Time
- TTL Compatible
- Low Power Requirements
- Compact Size
- Field Expandable
- Byte Control (2 Zones Maximum)
- Module Select
- Address Register
- Data Register (Optional)
- Basic System Available As 16K x 18 or 32K x 9

SPECIFICATIONS

Capacity:

4096, 8192, 16,384, 32,768 words expandable in cards to 131,072 x 18 or 262,144 x 9 capacity.

Word Length:

8, 9, 10, 12, 16, or 18 bits in a single memory card. Longer word lengths can be accommodated by combining memory cards.

Cycle Time:

in-40	500 nanoseconds
in-42	550 nanoseconds
in-44	875 nanoseconds

Access Time:

in-40	330 nanoseconds
in-42	400 nanoseconds
in-44	480 nanoseconds

Dimensions:

Memory Board:	8.175 Inches High
(16K x 18 or 32K x 9)	10.5 Inches Deep
	0.5 Inches—Mounting Centers

Mating Connector: See page 6-30.

Operational Mode: Read (NDRO), Write

Interface Characteristics:

TTL Compatible

Standard Input Lines:

- Cycle Initiate
- Byte Control
- Read/Write

Standard Output Lines:

- Data Available
- Memory Busy

D.C. Power Requirements:

MU-40: Selected

Voltage	Current (Max.)	Regulation
+12.0V	1.9 Amps	±5%
+ 5.0V	1.2 Amps	±5%
− 5.0V	<10.0 Milliamps	±5%

Unselected

Voltage	Current (Max.)	Regulation
+12.0V	0.142 Amps	±5%
+ 5.0V	1.2 Amps	±5%
− 5.0V	<10.0 Milliamps	±5%

D.C. Power Requirements (cont.):

CU-40:

Voltage	Current (Max.)	Regulation
+5.0V	2.8 Amps	±5%
−5.0V	0.32 Amps	±5%

Environment:

Temperature:	0°C to +50°C operating ambient
	−40°C to +125°C non-operating
Relative Humidity:	Up to 90% with no condensation
Altitude:	0 to 10,000 feet operating.
	Up to 50,000 feet non-operating.

Refresh:

The need for refresh cycles is self determined by the CU-40. For normally configured CU's, at the end of the refresh time out interval the CU either initiates a special refresh cycle or steals the next cycle for refresh if a regular memory cycle is in progress. An optional CU-40 configuration allows external control of refreshing to the extent that automatic cycle stealing is inhibited. At the end of the refresh time out, the CU asserts a refresh request signal that indicates a refresh cycle is required. At the user's discretion, a refresh grant signal is issued which then initiates a refresh cycle.

Special Options:

Intel offers the in-40 in a card chassis designed for mounting in 19″ and 24″ relay racks. UT-40 socket cards allow easy wire wrapping of custom interfaces in the card chassis. See pages 26 to 29 for more accessory information.

Another option is the in-41E Euroboard. Intel's Euroboard dimensions are 160mm high x 233.4 mm deep x 12.7 mm wide. See your local Intel representative for additional specifications.